Leukocytoclastic Vasculitis and Renal Cell Carcinoma

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Abstract

The association of leukocytoclastic vasculitis and renal cell carcinoma has been rarely documented. We report a patient who presented with leukocytoclastic vasculitis involving the skin and was diagnosed later as renal cell carcinoma. After the nephron-sparing surgery, the vasculitic lesions disappeared. We also briefly review cases of vasculitis and renal neoplasms.
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Key words: leukocytoclastic vasculitis, renal cell carcinoma

Introduction

A leukocytoclastic vasculitis predominantly involving the skin with occasional involvement of other organ systems may be a minor component of many other diseases. These diseases include infections (subacute bacterial endocarditis, Epstein-Barr virus infection, HIV infection, chronic active hepatitis etc.), ulcerative colitis, congenital deficiencies of various complement components, retroperitoneal fibrosis and malignancies (particularly reticuloendothelial disease, lymphosarcoma and carcinoma) (1). But there have been few descriptions of leukocytoclastic vasculitis in association with renal cell carcinoma (2, 3).

Case Report

A 63-year-old man, previously in good health, presented with purpuric lesions on his lower extremities and forearms. His physical examination was otherwise normal. The erythrocyte sedimentation rate was 98 mm/h, the blood count was normal and urinalysis was remarkable for microhematuria. Skin biopsy demonstrated a leukocytoclastic vasculitis (Fig. 1). The serum levels of C3, C4 and serum protein electrophoresis were normal. FANA, cryoglobulin, cANCA, pANCA, HBsAg, antiHBsAb and antiHIVAb were negative. Magnetic resonance imaging of the abdomen revealed a soft tissue mass of 3×4 cm in diameter in the middle pole of the right kidney. Computed tomography of the chest and the radionuclide bone scan, performed to evaluate the presence of a metastasis, were normal. The patient underwent nephron-sparing surgery and the pathological examination of the mass revealed clear cell type renal cell carcinoma (Fig. 2). The vasculitic skin lesions disappeared two weeks after the surgery and the patient is in good health at one-year follow-up.

Discussion

To our knowledge the association of vasculitis with renal carcinoma has been rarely reported. Andrasch et al reported a 63-year-old woman with cold-induced ischemia, hypergammaglobulinemia and gangrene of the digital phalanges of the fingers whose skin biopsy showed angiitis. She had a renal mass which was shown to be a sarcomatoid renal adenocarcinoma. Following the nephrectomy the digital ischemia and hypergammaglobulinemia improved (4). Sidhom et al reported a patient with renal cell carcinoma, who presented with polymyalgia rheumatica which resolved after nephrectomy (5). Hoag reported two cases of vasculitis which failed to demonstrate a cause and effect relationship between neoplasm and vasculitis because the renal cell carcinoma was recognized after autopsy. The first case was a 63-year-old man who presented with dyspnea, diarrhea and purpuric lesions on his upper extremities, which were found to be leukocytoclastic vasculitis. Autopsy showed granular cell type renal cell carcinoma and vasculitis involving skin, lungs and gastointestinal tract. In contrast to this patient, our patient had no clinical signs of systemic involvement of vasculitis. The second case was a 77-year-old woman with temporal arteritis. Autopsy showed both a clear cell type renal cell carcinoma and giant cell arteritis (2). The present patient also had renal cell carcinoma of clear cell type. Mautner et al reported another patient who was a 63-year-old-man who developed a purpuric eruption on his extremities in conjunction with surgical removal of a renal cell

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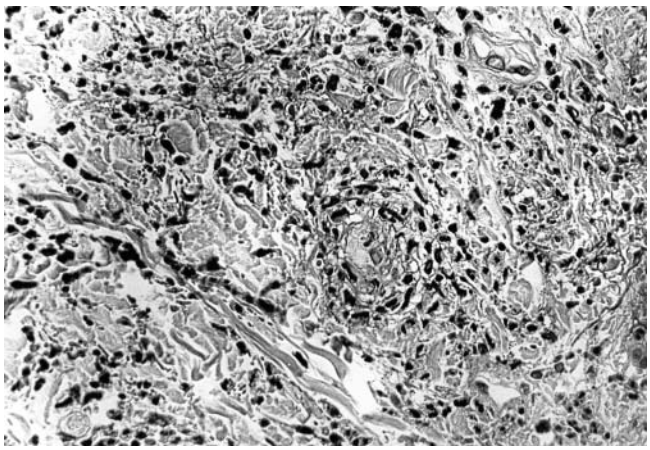


Figure 1. Leukocytoclastic vasculitis. Fibrinoid necrosis, neutrofils as well as leukocytoclasia in the vessel walls within the dermis (HE ×400).

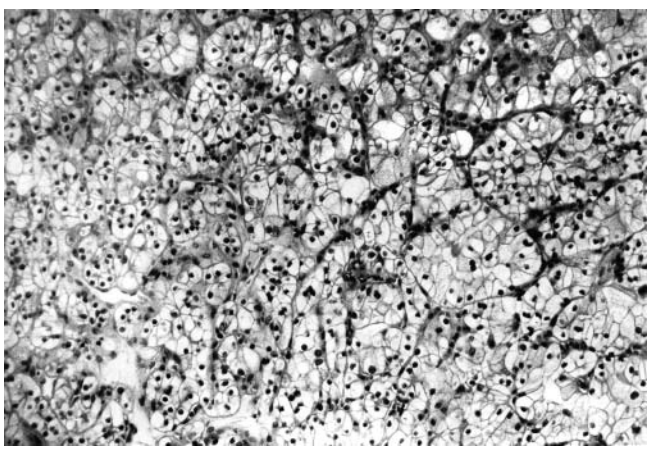


Figure 2. Typical clear cell type renal cell carcinoma (HE ×200).

carcinoma. Skin biopsy demonstrated a leukocytoclastic vasculitis. This case was also complicated by the additional association of cryoglobulinemia (3). There are also reported cases of Wegener's granulomatosis with the possible association of renal cell carcinoma (6, 7). The only presentation of renal cell carcinoma in our patient was a leukocytoclastic vasculitis. Many diverse processes including infectious, rheumatic and allergic diseases have been associated with this condition but the workup of our patient excluded these possibilities. But vasculitis was found to be secondary to renal cell carcinoma. Two weeks after the nephron-sparing surgery, the vasculitic lesions disappeared. In our case microscopic hematuria was thought to be secondary to renal cell carcinoma because histopathologically there was no evidence of kidney involvement by vasculitis.

Although several immunopathologic mechanisms underlying the malignancy-associated vasculitis have been proposed, cytokine production by malignant cells, which has been reported for renal cell carcinoma (8), may participate in the etiology of autoimmunity and lead to vasculitis.

In conclusion, malignancy should be suspected in unexplained leukocytoclastic vasculitis, and microscopic hematuria may serve in such a patient to diagnose a masked renal carcinoma.

References

1) Fauci AS, Haynes BF, Katz B. The spectrum of vasculitis: clinical, pathologic, immunologic and therapeutic considerations. Ann Intern Med **89**: 660–676, 1978.
2) Hoag GN. Renal cell carcinoma and vasculitis: Report of two cases. J Surg Oncol **35**: 35–38, 1987.
3) Mautner G, Roth JS, Grossman ME. Leukocytoclastic vasculitis in association with cryoglobulinemia and renal cell carcinoma. Nephron **63**: 356–357, 1993.
4) Andrasch RH, Bardana EJ Jr, Porter JM, Pirofsky B. Digital ischemia and gangrene preceding renal neoplasm: An association with sarcomatoid adenocarcinoma of the kidney. Arch Intern Med **136**: 486–488, 1976.
5) Sidhom OA, Basalaev M, Sigal LH. Renal cell carcinoma presenting as polymyalgia rheumatica. Resolution after nephrectomy. Arch Intern Med **153**: 2043–2045, 1993.
6) Villa-Forte A, Hoffman GS. Wegener's granulomatosis presenting with a renal mass. J Rheumatol **26**: 457–458, 1999.
7) Tatsis E, Reinhold-Keller E, Steindorf K, Feller AC, Gross WL. Wegener's granulomatosis associated with renal cell carcinoma. Arthritis Rheum **42**: 751–756, 1999.
8) Motzer RJ, Bander NH, Nanus DM. Medical progress: renal cell carcinoma. N Engl J Med **335**: 865–875, 1996.